

CHINTSCVA, S.A.; VAKHIL', Ye.P.

Use of a Fabry-Perot interferometer with photoelectric recording  
in measuring the velocities of particles in a rotating plasma.  
Zhur. prikl. spesk. 3 no. 2:105-108 Ag '65. (MIA 18:12)

1. Submitted March 1, 1965.

L 01290-66

EWT(1)/EPF(n)-2/ENG(m)/EPA(w)-2

IJP(c) AT

UR/0386/65/003/002/0105/0108

537.531:535.3

ACCESSION NR: AP5021486

55 44

55 44

72

AUTHOR: Odintsova, G. A.; Vaulin, Ye. P.

13

TITLE: Using a photoelectrically recording Fabry-Perot interferometer to measure  
the velocities of particles in a rotating plasma

9m

21,44,55

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 2, 1965, 105-108

TOPIC TAGS: plasma physics, interferometer, particle acceleration, gas discharge

ABSTRACT: The rotational velocities of atoms and ions were determined from the  
Doppler shift in spectral lines. A plasma accelerator of the acyclic type was used,  
operating in steady-state conditions. A high-current gas discharge (about 300 amps)  
was produced in argon at a pressure of 1 mm Hg between the cathode and the anode,  
which were made in the form of coaxial cylinders. The whole system was located in a  
homogeneous 800 oersted magnetic field parallel to the accelerator axis. The plasma  
in the anode (the outside electrode) was observed through slits. A Fabry-Perot in-  
terferometer-spectrograph combination was used for the observations. The interfer-  
ence pattern was recorded both photographically and photoelectrically. One of the

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ACCESSION NR: AP5021486

photoelectric recordings for Ar I lines at  $4158.6 \text{ \AA}$  is shown in fig. 1 of the Enclosure. The Doppler shift due to plasma rotation was measured by recording the lines alternately from different sections of the accelerator located symmetrically on both sides of the cathode. The figure shows two systems of superimposed lines. The peaks marked "+" were recorded on one side of the cathode, while those marked "-" were recorded on the other side at an equal distance. The shift  $\Delta v$  in one system of lines with respect to the other is related to the linear velocity of rotation in a given annular layer of the plasma by the expression  $\Delta v = v_0 \frac{2v}{\sigma}$ , where  $v_0$  is the frequency of the spectral line and  $c$  is the velocity of light. The average error in measurements was  $\pm 0.01 \text{ cm}^{-1}$ , which corresponds to a particle velocity of approximately  $100 \text{ m/sec}$ . A comparison between the photoelectric and photographic methods in measurements of the distribution of velocities of argon ions is shown in fig. 2 of the Enclosure. Since line shape does not figure in the photographic method of measurement, the photoelectric method is preferable, particularly in cases where the lines are asymmetric. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 01Mar65

NO REF Sov: 003

Card 2/4

ENCL: 02

OTHER: 002

SUB CODE: ME

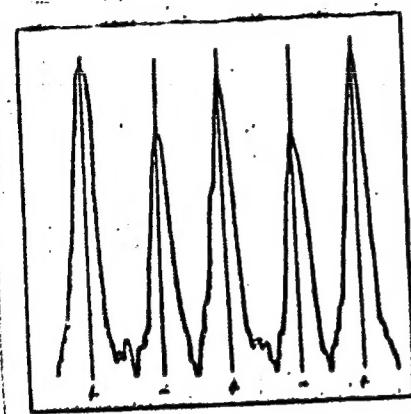
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ACCESSION NR: AP5021486

ENCLOSURE: 01

O

Fig. 1. Recording for Ar I lines at  
4158.6 Å



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ACCESSION NR: AP5021486

ENCLOSURE: 02

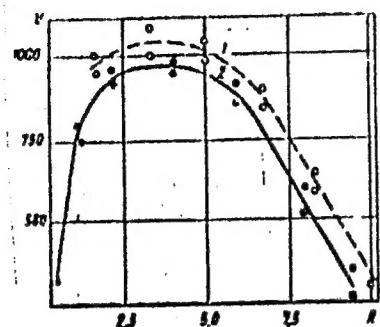


Fig. 2. Distribution of velocities  $v$  (m/sec) along the radius of the accelerator  $R$  (cm) measured by the photographic (1) and photoelectric (2) methods

Card 4/4

VAULIN Ye. P.

VAULIN, Ye. P., and SHIROKOV, M. F.,

"Teheniya Neizotermicheskoy Plazmy s Bol'shimi. (High Velocity Non-Isothermal Plasma Flows)"

report presented at the Intl., Symposium on High Temperature Technology held at Asilomar, California, 8-11 Sep 63.

VAULIN, Ye.P.; GVOZDKOV, N.N.

Diffusion type thermal shielding by means of a porous plate in a  
gas dynamic flow through percolation of a liquid and physicochemical  
reaction in a laminar boundary layer. Zhur.tekh. fiz. 32 no.2:  
238-247 F '62. (MIRA 15:2)

1. Kafedra statisticheskoy fiziki i mekhaniki Moskovskogo  
gosudarstvennogo universiteta, fizicheskiy fakul'tet.  
(Heat--Transmission) (Gas flow) (Boundary layer)

L-21580-66 EWT(1)/EWP(e)/EWT(m)/EPF(n)-2/EWG(m)/EWP(v)/EWP(j)/T/ETC(m)-6/EWA(1)  
ACC NR: AT6006912 SOURCE CODE: UR/0000/65/000/000/0198/0208  
IJP(c) JD/TG/WW/JW/GS/RM/WH 93  
AUTHOR: Vaulin, Ye. P. 92

ORG: Moscow Aviation Institute (Moskovskiy aviationsionnyy institut) B+1

TITLE: Some problems in the theory of a boundary layer with physicochemical transformations  
on a solid surface ✓

SOURCE: Teplo- i massoperenos. t. XI: Teplo- i massoperenos pri vzaimodeystvii tel  
s potokami zhidkostey i gazov (Heat and mass transfer. v. 2: Heat and mass transfer  
in the interaction of bodies with liquid and gas flows). Minsk, Nauka i tekhnika,  
1965, 198-208

TOPIC TAGS: surface boundary layer, turbulent boundary layer, heat transfer, sur-  
face property, ionized gas

ABSTRACT: The author studies the exchange of heat and mass during physicochemical  
surface transformations due to the interaction between ionized gases and solids  
where recombination of charged particles may have a considerable effect. The re-  
sults of this study may be used for analyzing heat and mass exchange in ionized  
21, 44, 53 21, 44

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L 21580-66  
ACC NR: AT6006912

gases when there are no electrical or magnetic fields present. A complete system of equations is given for a laminar boundary layer in the general case including the diffusion equation for the  $i$ -th component of the mixture, as well as the equations of continuity, motion, and conservation of energy and state. Expressions are given for determining the total enthalpy, heat capacity, and specific enthalpy<sup>1</sup> of the ideal gas which appear in this system of equations. These expressions are used for deriving a system of equations to describe steady-state processes in axially symmetric solids. The boundary conditions for the problem are analyzed and the case of a turbulent boundary layer with a zero pressure gradient on a sublimating surface is considered. Expressions are found for calculating the surface temperature, rate of disintegration, and concentrations of components. The resultant data may then be used for calculating the drag coefficient during turbulent flow close to a sublimating wall. Orig. art. has: 37 formulas. [14]

SUB CODE: 20/ SUBM DATE: 09Nov65/ ORIG REF: 002/ ATD PRESS: 4219

Card 2/2 VL

Name: VAULIN, S. . .

Dissertation: The composition and distribution of fungi in some chernozem  
istic soils of Siberia

Degree: Cand. Biol. Sci

*Defended at*  
Affiliation: Acad. Sci. USSR, Botanical Inst. imeni V. L. Komarov

*Publication*  
Defense Date, Place: 1956, Leningrad

Source: Kuchzhnaya Letopis', No 45, 1956

VAULINA, E.N.

~~Some features of the algal flora of some soils of White Russia.~~  
Vestsi AN BSSR Ser. biol. nav. no.1:5-15 '58. (MIRA 11:5)  
(White Russia--Algae)

VAULINA, E. N.

Systematic position of the soil form of *Plectonema puteale*  
(Kirchn.) Hansg. Bot.mat.Otd.spor.rant. 12:19-22 Ja '59.  
(MIRA 12:12)  
(Algae) (Soil micro-organisms)

VAULINA, E. N.

Xanthophyta occurring in soils of White Russia. Bot. mat. Otd.  
(MIRA 12:12)  
spor. rast. 12:98-106 Ja '59.  
(White Russia--algae) (Soil micro-organisms)

L1623-65 EXG(j)/EXG(r)/EXG(l)/EXG(v)-3/EXG(v)/EXG(a)/EXG(c) Pe-5/Pb-4/

Pa-4 AND DD

ACCESSION NR: AP5000095

S/0205/64/004/006/0883/0892

AUTHOR: Anikeyeva, I. D.; Vaulina, E. N.; Shevchenko, V. A.

TITLE: The action of ultraviolet rays on Chlorella

SOURCE: Radiobiologiya, v. 4, no. 6, 1964, 883-892

TOPIC TAGS: algae, Chlorella, UV radiation, mutation, population dynamics, genetics

ABSTRACT: Cultures of Chlorella vulgaris, terricola, and ellipsoidea were exposed to UV radiation from two BUV-15 lamps. These lamps, which emit 80% of their energy in the 2537-Å range, were placed 25 cm from the surface of 1-ml suspensions of the above algae. Exposure durations ranged from 30 sec to 16 min. It was found that sensitivity to UV varied according to the species. A "LARG-1" strain of Chlorella vulgaris was found to be the one most resistant to UV damage. In general, the viability curve, plotted as a function of the UV dosage, had a sigmoid shape. Mutation frequency as a function of the UV dosage was studied for the LARG-1 strain only and was found to increase to a

Caru 1/2

L 16623-65  
ACCESSION NR: AP5000095

maximum level followed by a decrease as the dosage was further increased. It was concluded that UV acts on the irradiated cell for several generations, ultimately altering the entire dynamics of population growth. Orig. art. has: 7 tables and 8 figures.

ASSOCIATION: Institut biologicheskoy fiziki Akademii nauk SSSR,  
Moscow (Institute of Biological Physics, Academy of Sciences, SSSR)

SUBMITTED: 27Apr63

ENCL: 00

SUB CODE: LS

NO REF Sov: 002

OTHER: 026

ATD PRESS: 3147

Card 2/2

6/0217/64/009/003/0393/0394

ACCESSION NR: AP4038937

AUTHOR: Vaulina, E. N.; Anikeyeva, I. D.

TITLE: Evaluation of the productivity of Chlorella strains in liquid culture

SOURCE: Biofizika, v. 9, no. 3, 1964, 393-394

TOPIC TAGS: Chlorella strain, Chlorella productivity, Chlorella culture, non-circulating medium, optimal productivity period, optimal productivity formula, autospore number, cell division duration, Chlorella growth coefficient

ABSTRACT: Growing of these algae in containers with a non-circulating medium while a mixture of CO<sub>2</sub> and air is blown through is a convenient culture method which is particularly adapted to the selection of strains. This however requires finding the time of optimal productivity, since productivity decreases rapidly in such a medium. The following formulas are presented for finding this period.
$$N_t = N_0 e^{kt} \quad (1)$$
 where  $N_0$  is the number of cells at the start,  $N_t$  the number of cells at time  $t$ ;  $e$ , the natural logarithm;  $k$ , a constant depending upon the properties of the given organism and culture conditions, called coefficient of rate of growth.

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ACCESSION NR: AP4038937

$$k = \frac{1}{t} \log \frac{N_t}{N_0} \quad (2)$$

$$k = \frac{1}{T} \log [1 + x(a-1)] \quad (8)$$

a - number of autospores

x - number of dividing cells

T - duration of cell division cycle

The theoretical and experimental results are compared, and it was found that they agreed satisfactorily for the 1st and 2nd day of culture where productivity is optimal. The values a, T, and k are useful criteria for selection, and x an indicator of culture condition. Orig. art. has 1 table, 8 formulas, and 1 figure.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR, Moscow (Institute of Biophysics, AN SSSR) [REDACTED]

SUBMITTED: 04Jan63

ENCL: 00

Card

2/3

ACCESSION NR: AP4038937

SUB CODE: LS

NO REF SOV: 002

OTHER: 000

Card 3/3

VAULINA, E.N.; ANIKEYEVA, I.D.

Evaluation of the productivity of Chlorella strains. Genetika  
(MIRA 19:1)  
no.5:176 N '65.

1. Institut biologicheskoy fiziki AN SSSR, Moskva. Submitted  
August 12, 1965.

VAULINA, E.N.; ANIKEYEVA, I.D.; SHEVCHENKO, V.A.

Effect of 1,4-bis-diazoacetylbutane and its combination with  
ultraviolet rays on Chlorella. Genetika no. 6:56-60 D '65  
(MIRA 19:1)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

ANIKEYEVA, I.D.; VAULINA, E.N.; SHEVCHENKO, V.A.

Effect of ultraviolet rays of Chlorella. Radiobiologia 4 no.6:883-  
(MIRA 18:7)  
892 '64.

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

L 11287-67 ENT(m)/ENT(t)/ENT ID: (c) 30  
ACC NR: ABC02330 SOURCE CODE: UN/UNP/66/000/0001:0000/0000

AUTHOR: Adysov, S. N.; Vasilina, Yu. P.

AUTHOR: Adesoye, O.  
TITLE: A method for silverplating steel components

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 31304

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i tekhniki Nauka, 1965, 140-141

TOPIC TAGS: copper plating, metal plating, silver

TOPIC TAGS: copper plating, metal plating, -

ABSTRACT: The article is a report on development of a simple and economic method for depositing a copper sublayer on steel components for subsequent silverplating. Before application of the copper coating, the components are degreased and scoured and then washed in water. The copper plating is done in an electrolyte with the following composition (in g/l): copper sulfate--31, ammonia--6.5, glycerin--18 and caustic soda--44. Any widely used method is then used for silverplating. [Translation of abstract]

SUB CODE: 11

UDC: 621.357.7:669.222

Card 1/1-1b

WATMGARDT, L.

How to preserve lemons. Obshchestv.pit. no.12:11 D '60.  
(MIRA 13:12)

1. Zaveduyushchiy proizvodstvom restorana "Altay," Ust'-Kamenogorsk.  
(Lemon—Preservation)

VAUPSHASOV, STANISLAV ALEKSEYEVICH

Partizanskaya khronika. Moskva, Voenizdat, 1959.  
470 p. illus. 21 cm.

MOZOLEVSKAYA, Ye.G.; VAVAK, Z.

The complex of insects feeding on leaves in the floodplain stands of the  
Khoper Preserve. Trudy Khop. gos. zap. no.4:75-92 '61. (MIRA 16:3)  
(Khoper Preserve—Forest insects)

NOVIKOV, A.N., prof.; GARIN, N.D., doktor med.nauk; GOL'BERT, Z.V.,  
kand.med.nauk; VOLKOVA, M.A., kand.med.nauk; KISELEVA, Ye.S.,  
kand.med.nauk; MATVEYEVA, T.N., kand.med.nauk; VAVAKIN, A.D.,  
kand.med.nauk

Initial experience in the combined treatment of pulmonary  
cancer. Khirurgiia no.8:22-28 Ag '62. (MITA 15:8)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo onkologicheskogo  
instituta imeni P.A. Gertseva (dir. - prof. A.N. Novikov) Mini-  
sterstva zdravookhraneniya RSFSR.  
(LUNGS—CANCER)

VAVAKIN, A.D.

Results of the preoperative use of chemotherapy in compound treatment of pulmonary cancer. Antibiotiki 10 no.10:940-945  
(MIRA 18:12)  
0 '65.

1. Nauchno-issledovatel'skiy onkologicheskiy institut imeni  
P.A. Gertsen'a Ministerstva zdravookhraneniya RSFSR, Moskva.  
Submitted June 1, 1965.

VAVAKO, D.

ALBANIA / Diseases of Farm Animals. Diseases  
Caused by Bacteria and Fungi

R-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7305

Author : Dhimitter Vavako

Inst : Not Given

Title : Enterotoxemia of Sheep

Orig Pub: Bul. Shkenc. natyr. 1956, No 2, 3-26 (Alb.;  
rez. frants.)

Abstract: In Albania, the enterotoxemia of sheep was observed, losses from which reached 20 percent of the livestock. The causal agent - Bacillus paludis. Activation of the pentrative or saprophytic stimulant in the organism, is furthered by disturbances of gastric secretions, upon the eating of frozen feed, and changes in the organism connected with giving birth, therefore,

Card 1/2

VAVAKO, Dimitr, doktor

Veterinary service in Albania. Veterinariia 36 no.4:79-81 Ap '59.  
(MIRA 12:7)

1. Direktor Albanskogo instituta veterinarnykh issledovaniy.  
(Albania--Veterinary hygiene)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859030002-3

VAVANOV, Yury Vasil'evich.

Operatron circuits. Vuzov. Nauka. I. e. O. S. no. 510113  
by '62. 17:00

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859030002-3"

VAVANOV, Yu.V.

Radar method for measuring the acceleration of uncoupled sections  
in hump yards. Avtom., telem. i sviaz' 8 no.10:8-11 0 '64.  
(MIRA 17:11)

1. Starshiy inzh. laboratorii radiosvyazi Vsesoyuznogo nauchno-  
issledovatel'skogo instituta zheleznodorozhnogo transporta Mi-  
nisterstva putey soobshcheniya.

VAVANOV, Yu.V., aspirant

Measuring the slowing down of the cuts in the braking position.  
Vest. TSNII MPS 23 no.7:30-35 '64. (MIPA 18:3)

VAVAYEVA, L.A.; ARTEM'YEVA, V.V.

Periodicity of change in composition of oils and gases in  
Devonian and Carbonaceous series in the Saratov Volga Valley  
region. Geol. nefti i gaza 8 no.12:13-18 D '62. (MIRA 18:2)  
1. Nizhnevolzhskiy nauchno-issledovatel'skiy institut geologii  
i geofiziki.

ARTEM'YEVA, V.V.; VAVAYEVA, I.A.

Relation of the composition of Jivet oils in the Volga Valley portion of Saratov Province to the geological conditions governing the existence of pools. Trudy NVNIIGG no.1:58-62 '64.  
(MIRA 18:6)

MASHKOVICH, K.A.; VAVAYEVA, L.A.

Middle Devonian Riphean massifs in the Volga Valley portion of  
Saratov Province. Geol.neft i gaza 6 no.10:47-50 O '62.  
(MIRA 15:12)

1. NVNIIGG.

(Saratov Province—Oil snads)

VAVCHUNOVSKAYA, M.A.

Study of chromatic fatigue in myasthenia. Trudy 1-го MMI 243  
(MIRA 1783)  
147-150 '63

MOKEYEVA, T.M.; VAVIR, L.D.

Some data on the effect of zinc phosphide on the lesser suslik  
kept in an area seeded with baits containing this poison.  
Trudy VIZR no.12:130-137 '58. (MIRA 13:5)  
(Zinc phosphide) (Susliks)

53700C

81554

S/062/60/000/05/03/000  
B004/B066AUTHORS: Mikhaylov, B. M., Vaver, V. A.TITLE: Organoboron Compounds. 56. Synthesis of Trialkylborons  
From Metaborates and Their Conversion Into Dialkyl Boric  
Acid EstersPERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh  
nauk, 1960, No. 5, pp. 852-856

TEXT: A thorough investigation of the reaction of trimeric metaborate with Grignard reagent in vacuo at low temperature and in the presence of water excess revealed that the formation of dialkyl boric acid esters takes place via the intermediate stage of trialkylborons. At 9 - 9.5 M Grignard reagent 70 - 80% trialkylboron was obtained, i.e.: triisopropylboron, tri-n-butylboron, and triisoamylboron. To check the assumption that the esters of the dialkyl boric acids are formed only by reaction of trialkylborons with alcohol, the afore-mentioned trialkylborons were allowed to react with cyclohexyl-, sec.-octyl- and isoamyl alcohol, and the following compounds were obtained: sec.-octyl ester of the di-iso-

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81554

Organoboron Compounds. 56. Synthesis of Trialkylborons From Metaborates and Their Conversion Into Dialkyl Boric Acid Esters

S/062/60/000/05/03/008  
B004/B066

propyl boric acid, cyclohexyl ester of the diisopropyl boric acid, isoamyl ester of the di-n-butyl boric acid, phenyl ester of the diisoamyl boric acid. The data of these compounds are given in a table. The authors discuss the course of the reaction between trialkylborons and alcohols and give the following reaction equations:

$R_3B + R'OH \longrightarrow R_3B \leftarrow O \begin{smallmatrix} H \\ R' \end{smallmatrix}$ , (Formation of a complex compound (I)). This compound decomposes according to equation (1):  $R_3B \leftarrow O \begin{smallmatrix} H \\ R' \end{smallmatrix} \longrightarrow R_2BOR' + RH$ , or reacts according to equation (2) to form the complex (II):

$R_3B \leftarrow O \begin{smallmatrix} H \\ R' \end{smallmatrix} \longrightarrow R_2BH \leftarrow O \begin{smallmatrix} H \\ R' \end{smallmatrix} + \text{olefin}$ . The complex (II) decomposes according to equation (3):  $R_2BH \leftarrow O \begin{smallmatrix} H \\ R' \end{smallmatrix} \longrightarrow R_2BOR' + H_2$ . The rate of the reactions (1) and (2) - (3) depends on the nature of the trialkylboron and alcohol applied. In the case of sec.-octyl alcohol and triisopropylboron the ratio of the two reaction rates is 1 : 2.5. The reaction with cyclohexanol takes place according to equations (2) and (3), whereas in the reaction of tri-n-butylboron with isoamyl alcohol both reactions proceed

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Organoboron Compounds. 56. Synthesis of Dialkyl- 81554  
borons From Metaborates and Their Conversion S/062/60/000/05/03/000  
Into Dialkyl Boric Acid Esters B004/B066

with equal rate. As may be seen from the preparation of the phenyl ester  
(at 170 - 180°C), the reaction is possible also with phenols. There are  
1 table and 8 references: 4 Soviet, 2 German, and 2 American. *X*

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni N. D.  
Zelinskogo of the Academy of Sciences, USSR)

SUBMITTED: November 3, 1958

Card 3/3

CA

6

*Synthesis of dichlorotetrapyridine cobaltic hexachloroplumbate.* A. V. Kapustinskii and V. A. Vaver (D. I. Mendeleev Chem. Technol. Inst., Moscow), *Inst. Akad. Nauk S.S.R., Odsl. Khim. Nauk* 1931, 621-3. —In the absence of direct data, the heat of the reaction  $PbCl_6 + 2Cl^-$  (gas) =  $PbCl_6^{2-}$  is estd. on the assumption that the heats of formation of the homologous ions  $PbCl_6^{2-}$  and  $SnCl_6^{2-}$  stand in the ratio of the logarithms of the at. nos. of Pb and Sn. The heat of formation of the  $PbCl_6^{2-}$  ion is thus taken to be 19.5 kcal. The heat of formation  $Q$  of a complex hexachloroplumbate  $M_2PbCl_6$  is then calc'd. by the usual thermochem. cycle, giving  $Q = U_0 + U + E$ , where

$U_0$  = energy of formation of the complex ion from the gaseous ions and addends, and the lattice energies  $U$  and  $U_0$  of the simple and of the complex salt, are calc'd. with the aid of K's equation from the ionic radii  $r$ . The result is that, for  $M_2PbCl_6$ ,  $Q > 0$  if the radius of the cation  $r_c > 1.2 \text{ \AA}$ . This accounts for the fact that only hexachloroplumbates of  $Ni^{2+}$ ,  $K^{+}$ ,  $Rb^{+}$ , and  $C_6^{4+}$  have been described. Salts of large complex cations should be stable, except for readily oxidizable cations, e.g. those contg.  $CO(NH_2)_2$ , which are unstable on account of the high oxidation potential of  $Pb^{2+}$ . A new hexachloroplumbate of a complex cation was synthesized successfully from  $[Co(C_6H_5N)_4Cl_6]Cl \cdot 6H_2O$  (I) and  $H_2[PbCl_6]$  (II). To prep. I, 30 g.  $CoCl_2 \cdot 6H_2O$  was added to 20 g.  $[Co(C_6H_5N)_4Cl_6]Cl \cdot 6H_2O$  in 30 ml.  $H_2O$ ; the resulting dark-blue soln. was treated with a stream of  $Cl_2$ , with the temp. kept below 40°. The yield of dry I, gray-green crystals, is 10 g.; the anhyd. salt is green blue. It was obtained by electrolysis of  $HCl$  of d. 1.18 with Pb anodes. A soln. of 2.635 g. I in 150 ml.  $H_2O$  reacted with an amt. of II contg. 0.3251 g. Pb, giving green  $[Co(C_6H_5N)_4Cl_6]_2[PbCl_6] \cdot 6H_2O$  (III), which becomes anhyd. over  $PbO$ . This salt is insol. in dil. inorg. acids, and hydrolyzes slowly in  $H_2O$  to  $PbO_2$ .

N. Thon

WAYER V. A.

The Hofmann reaction with amides of  $\alpha$ -bromo-substituted acids. V. M. Radionov, E. N. Alekseeva and V. A. Vayns (D. I. Mendeleev Chem. Technol. Inst., Moscow).

APPROVED FOR RELEASE: 08/31/2001

**CIA-RDP86-00513R001859030002-3"**

BERGEL'SON, L.D.; VAVER, V.A.; BEZZUBOV, A.A.; SHEMYAKIN, M.M.

Unsaturated acids and macrocyclic lactones. Report No.13:  
New synthetic path for obtaining the divinylethane system.  
Izv. AN SSSR. Ser. khim. no.8:1453-1456 Ag '64.

1. Institut khimii prirodnykh soyedineniy AN SSSR. (MIRA 17:9)

VAVER, V. A.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 22 - 30/62

Authors : Mikhaylov, B. M., and Vaver, V. A.

Title : Diphenylboric acid and its derivatives

Periodical : Dok. AN SSSR 102/3, 531-534, May 21, 1955

Abstract : Special experiments were made to prove that the statements of German chemists A. Michaelis (1894), and W. Koenig (1930) regarding the synthesis and properties of diphenylboric acid and its derivatives are false. It is the contention of the authors that the basic material and type of reaction as described by the German scientists would rather have led to the formation of diaryl borates and not diphenylboric acid or diphenyl borates. The properties of diphenylboric acid and its derivatives as determined by this experiment prove beyond any doubt that the German chemists did not deal with diphenylboric acid. Five German references (1894-1954).

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Organ. Chem.

Presented by: Academician B. A. Kazanskiy, January 11, 1955

Vaver, V. I.

Vaver, V. A.

"The synthesis and transformation of diaryl boric acids." Cand.  
Sci USSR. Inst of Organic Chemistry imeni N. D. Zelinskii. Moscow,  
1956 (Dissertation for the degree of Candidate in Chemical Sciences)

Knizhnaya letopis'  
No. 25, 1956. Moscow

USSR/ Organic Chemistry - Synthetic organic chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11792

Author : Mikhaylov B.M., Vavar V.A. (Communication 8)  
Mikhaylov B.M., Shchegoleva T.A. (Communication 9)

Inst Title : Department of Chemical Sciences, Academy of Sciences USSR  
: Organic Boron Compounds. Communication 8. Synthesis and Properties  
of Diaryl-Boric Acids. Communication 9. On Action of Phosphorus Pentachloride  
on Esters of Dialkyl-Boric and Alkyl-Boric Acids. Synthesis of  
Dialkyl Borochlorides and Esters of Alkyl-Chloroboric Acids.

Orig Pub : Izv. SSSR, Otd. khim. n, 1956, No4, 451-456; 508-509.

Abstract : Communication 8. Description of synthesis of  $(\alpha\text{-C}_{10}\text{H}_7)_2\text{BOH}$  (I),  
 $(p\text{-BrC}_6\text{H}_4)_2\text{BOH}$  (II) and  $(p\text{-ClC}_6\text{H}_4)_2\text{B(OH).H}_2\text{O}$  (III) and study of the  
properties of the acids and their derivatives.  $(\alpha\text{-C}_{10}\text{H}_7)_2\text{BOC}_4\text{H}_9\text{-iso}$   
(IV),  $(p\text{-BrC}_6\text{H}_4)_2\text{BOC}_4\text{H}_9\text{-iso}$  (V) and  $(p\text{-ClC}_6\text{H}_4)_2\text{BOC}_4\text{H}_9\text{-iso}$  (VI) were

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USSR/ Organic Chemistry - Synthetic organic chemistry

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11792

obtained from  $(\text{iso-C}_4\text{H}_9\text{O})_3\text{B}$  (VII) and the corresponding aryl-magnesium bromides. IV, V and VI are not hydrolyzed by water and acids and form with alkalis complexes of the type  $[\text{Ar}_2\text{B}(\text{OC}_4\text{H}_9\text{-iso})(\text{OH})]_2\text{Me}$  (VIII).

Salts of VII are converted on heating in aqueous solutions to salts of diaryl-borenic acids  $(\text{Ar}_2\text{B}(\text{OH})_2)\text{Me}$  (IX). Hydrolysis of IV, V and VI with aqueous solutions of  $\text{NH}_4\text{OH}$  or  $\text{Ba}(\text{OH})_2$  results not in salts of diaryl-boric acids but in complex salts IX (Me -  $\text{NH}_4$ ; Ba/2). Acids I, II and III were obtained on acidification of the salts IX. As a result of treatment of I with excess  $\text{SOCl}_2$  was isolated  $(\text{OC}_10\text{H}_7)_2\text{B}_2\text{O}$  (X). Results of the investigation show that literature data on II and III are erroneous. To 1 M ether-benzene solution of 0.5 mole  $\text{C}_10\text{H}_7\text{MgBr}$  are added at  $-30^\circ$  0.225 mole VII in 50 ml ether. After stirring for 7 hours at  $-75^\circ$ , treating the reaction products with 350 ml of 5% HCl, the ether-benzene solution is dried over  $\text{Na}_2\text{SO}_4$ .

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USSR/ Organic Chemistry - Synthetic organic chemistry

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Abs Jour : Referat Zhyr - Khimiya, No 4, 1957, 11792

Residue after removal of solvents is diluted with isopentane, yield of IV 63%, MP 104-105° (from n-hexane). From filtrate, esterification of remaining iso-C<sub>4</sub>H<sub>9</sub>OH, were obtained 15%  $(\alpha -C_{10}H_7)BOC_4H_9$ -iso, BP 166-168°/6 mm, d<sub>4</sub><sup>20</sup> 0.9777. To a suspension of 10 g IV in 20 ml CH<sub>3</sub>OH are added 15 ml of 30% NH<sub>4</sub>OH. Obtained 97.5%  $[(\alpha -C_{10}H_7)_2B(OH)_2]_2NH_4$  (XI), MP 107-108° (from CH<sub>3</sub>OH). Suspension of 4.94 g XI in 30 ml ether acidified with 5 ml HCl (1:1). From ether layer isolated 71.7% I, MP 114.5-115° (from petroleum ether). Solution of 2 g I in 5 ml SOCl<sub>2</sub> boiled 2 hours. After removal excess SOCl<sub>2</sub> obtained 98% X, MP 190-192° (from benzene + petroleum ether). From 0.65 mole p-BrC<sub>6</sub>H<sub>4</sub>MgBr (1 M solution) and 0.25 mole VII, after stirring for 8 hours at -75°, treatment with 450 ml of 5% HCl and esterification, were obtained 39% V, BP 161-163°/1 mm, (in N<sub>2</sub> current) and 37% p-BrC<sub>6</sub>H<sub>4</sub>B(OC<sub>4</sub>H<sub>9</sub>-iso) BP 109-110°/1 mm, d<sub>4</sub><sup>20</sup> 1.1583. 2.25 g V mixed by shaking with 5 ml 30%

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USSR/ Organic Chemistry - Synthetic organic chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11792

$\text{NH}_4\text{OH}$ . Yield of  $\text{[(p-BrC}_6\text{H}_4)_2\text{B(OH)}_2]}\text{NH}_4$  (XII) 87.3%, MP 134-135°

(from benzene). From solution of 1.23 g V in 3.65 ml 0.8 N KOH, was slowly driven off, at 60-70°, in a current of  $\text{N}_2$ , the water. Residue crystallized from mixture  $\text{C}_6\text{H}_6 + \text{CH}_3\text{OH}$ . Yield of  $\text{[(p-BrC}_6\text{H}_4)_2\text{B(OH)}_2\text{K}}$  (XIII) 0.8 g. 1.65 g XII treated with dilute HCl, yield of II 86%, MP 90-91° (from petroleum ether). II was also obtained from XIII. After stirring for 8 hours at -75° 0.6 mole p-ClC<sub>6</sub>H<sub>4</sub>MgCl (1 M solution)

and 0.25 mole VII, treatment with 450 ml 5% HCl and esterification the reaction products are rapidly distilled in  $\text{N}_2$  stream. As a result of fractionation isolated 40% VI, BP 134-135°/1<sup>2</sup> mm,  $d_4^{20}$  1.1414, and 25%

p-ClC<sub>6</sub>H<sub>4</sub>B(OC<sub>4</sub>H<sub>9</sub>-iso)<sub>2</sub>, BP 93-95°/1 mm,  $d_4^{20}$  1.0051.1.73 g VI shaken with 15 ml saturated solution of Ba(OH)<sub>2</sub>. Obtained 89.5%  $\text{[(p-ClC}_6\text{H}_4)_2\text{B(OH)}_2]}\text{Ba}$  (XIV). 2 g XIV treated with 10 ml HCl (1:4). Crystals of III

Card 4/6

MIKHAYLOV, B.M.; VAVER, V.A.

Organoboron compounds. The preparation of complex compounds of unsymmetric boron triaryls. Dokl. AN SSSR 109 no.1;94-97 J1-Ag '56.  
(MLRA 9:10)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii nauk SSSR. Predstavлено академиком B.A. Kazanskim.  
(Boron organic compounds)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859030002-3

WAVER, V. A.

1  
4P-47

2  
4P-38

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859030002-3"

Via 1/4c  
Distr: 4E1,j/4E3d/4E2c(j)

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IN THE BUREAU OF INVESTIGATION

Kolth. Russ. 1957, 8, 2, 1-44, 5, 1-44  
To the complex from 10.01 g. iso-AmOBPh<sub>3</sub> and 3.14 g. pyridine in 10 ml. Et<sub>2</sub>O was added 8.75 g. 1-C<sub>6</sub>H<sub>5</sub>LiEt<sub>2</sub>O in 50 ml. Et<sub>2</sub>O; after refluxing 4 hrs. the mixt. was washed with H<sub>2</sub>O and yielded on evapn. and diln. with MeOH 57.5% 1-C<sub>6</sub>H<sub>5</sub>BPh<sub>3</sub>C<sub>6</sub>H<sub>5</sub>N, decomp. 175-80°. Similarly, iso-BuOBPh<sub>3</sub> and  $\rho$ -MeC<sub>6</sub>H<sub>4</sub>Li gave 77%  $\rho$ -MeC<sub>6</sub>H<sub>4</sub>BPh<sub>3</sub>C<sub>6</sub>H<sub>5</sub>N (I), m. 166-8° (dil. MeOH). Also prepd. were 67%  $\sigma$ -MeC<sub>6</sub>H<sub>4</sub>BPh<sub>3</sub>C<sub>6</sub>H<sub>5</sub>N, m. 177-9° (aq. Me<sub>2</sub>CO); 61% (1-C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BPh<sub>3</sub>C<sub>6</sub>H<sub>5</sub>N, decomp. 215-17°; 73%  $\sigma$ -1-C<sub>6</sub>H<sub>5</sub>-BC<sub>6</sub>H<sub>4</sub>MeC<sub>6</sub>H<sub>5</sub>N, m. 203-5°; 72%  $\sigma$ -1-B(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BC<sub>6</sub>H<sub>4</sub>Me-C<sub>6</sub>H<sub>5</sub>N, m. not given. The 2,4,4'-trisOBPh<sub>3</sub>NH<sub>2</sub> was added to the mixt. gave 53%  $\rho$ -trisOBPh<sub>3</sub>NH<sub>2</sub>, m. 159-61° (C<sub>6</sub>H<sub>6</sub>); similarly was prepd. 42.5% ( $\rho$ -ClC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>BPh<sub>3</sub>NH<sub>2</sub>, m. 213-15° (Et<sub>2</sub>OH). 1 with 30% H<sub>2</sub>SO<sub>4</sub> in Et<sub>2</sub>O under N gave 48%  $\rho$ -MeC<sub>6</sub>H<sub>4</sub>BPh<sub>3</sub>, b.p. 170-3°, which solidifies on chilling. The above listed complexes can also be converted to the free R<sub>2</sub>B by treatment with dry HCl in Et<sub>2</sub>O; thus was prepd.  $\rho$ -MeC<sub>6</sub>H<sub>4</sub>BPh<sub>3</sub> from the corresponding adduct with NH<sub>3</sub>. Pyrolysis of (1-C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BPh<sub>3</sub>C<sub>6</sub>H<sub>5</sub>N in a sausage flask at 175-85° gave 87.5% C<sub>6</sub>H<sub>5</sub>N and 45% (1-C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BPh<sub>3</sub>, m. 146-8°, b.p. 230-40°. Similarly was obtained (1-C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BC<sub>6</sub>H<sub>4</sub>Me- $\sigma$ , b.p. 197-8°. Ph<sub>3</sub>B.NH<sub>3</sub> in Et<sub>2</sub>O treated with dry HCl gave 62.5% Ph<sub>3</sub>B; the pyridine complexes above can also be decompd. to R<sub>2</sub>B by picric acid in C<sub>6</sub>H<sub>6</sub>.

125 12/14

Distr: 4E43/4E73/4E7c(4)

✓ Organoboron compounds. XVIII. New method of synthesis of diarylboronic acids. B. M. Mikhalev and V. A. Vasil'ev. Z. Obshch. Khim. 31, 1320-1323 (1957).

Khem. Nauk 1957, 986-9. 1 C 1 51 1481, 52 407, 8. To 0.2 mole  $PbMgBr$  was added with cooling 3 g. (iso-BuOBu)<sub>2</sub> in  $C_6H_6$ , the mixt. refluxed 1 hr. and treated with 200 ml. 3.5% HCl and the org. layer, sepd. rapidly and evapd. rapidly in to 5 ml. with min. heating, yielding a addn. of EtOH-hexane to the residue 3.3 g. phenylboronic anhydride, in 100-3%, while the mother liquor after evapn. and addn. of isopentane gave 51.6%  $(Ph_2B)_2O$ , m. 130-1°. The combined distillates give iso-BuOH and some  $H_2BO_3$ .  $PbMgBr$  treated as above with  $(C_6H_5OBO)_2$  and the crude product treated with  $HOCH_2CH_2NH_2$  gave 62%  $Pb_2BO-CH_2CH_2NH_2$ , m. 190-1° (EtOH). (iso-BuOBu)<sub>2</sub> with 1- $C_6H_5MgBr$  gave similarly after treatment with 1.5% HCl 78.8% (1- $C_6H_5_2B_2O$ ), m. 114-15°. Similar reaction of  $p$ -MeC<sub>6</sub>H<sub>4</sub>MgBr and treatment of the crude product with  $HOCH_2CH_2NH_2$  gave 41%  $(p$ -MeC<sub>6</sub>H<sub>4</sub>BOCH<sub>2</sub>CH<sub>2</sub>H<sub>2</sub>)\_2, m. 174.6-70° (EtOH), along with 21.2%  $p$ -MeC<sub>6</sub>H<sub>4</sub>B(OCH<sub>2</sub>CH<sub>2</sub>H<sub>2</sub>)<sub>2</sub>, b.p. 127-8°,  $\eta_D^{20}$  0.9106, m.p. 147.8°. The use of 0.2 mole  $p$ -MeC<sub>6</sub>H<sub>4</sub>MgBr and 0.03 mole (iso-BuOBu)<sub>2</sub> gave after esterification of crude products with  $HOCH_2CH_2NH_2$  41.7%  $(p$ -MeC<sub>6</sub>H<sub>4</sub>BOCH<sub>2</sub>CH<sub>2</sub>H<sub>2</sub>)\_2, m.p. 147.8° and 12.7%  $(p$ -MeC<sub>6</sub>H<sub>4</sub>B(OCH<sub>2</sub>CH<sub>2</sub>H<sub>2</sub>)<sub>2</sub>), b.p. 127-8°,  $\eta_D^{20}$  0.9106, m.p. 147.8°. The latter ester is slowly oxidized by contact with air.

G. M. Kavaleff

PM

R-10

VII V(F), V/1

AUTHORS: Mikhaylov, B. M., Vaver, V. A., 62-58-4-5,32

TITLE: Boron-Organic Compounds ( Bororganicheskiye soyedineniya)  
Communication 22: On the Mechanism of Hydrolysis of  
Diarylboric Esters (Soobshcheniye 22: O mekhanizme hidroliza  
efirov diarilbornykh kislot )

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk,  
1959, Nr 4, pp. 419-424 (USSR)

ABSTRACT: The alkylesters of diarylboric acids are stable against  
the effect of hydrolyzing agents, as there are acids and  
hydroxides of alkaline metals. On their action the esters  
of diarylboric acids dissolve by forming the salts of  
diarylalkoxyboric acids (see formula II). Such salts convert  
only to a small degree into diarylboric acids (formula IV).  
Mainly a cleavage of the elements of water and not of alcohol  
takes place (with intermediate diarylalkoxyboric acids).  
Then a reconversion of these into the initial ester takes  
place (see formula 1-4). The hydrolysis of the esters of  
diarylboric acids takes place very easily under the influence  
of ammonia dissolved in water (or barium hydroxide). In the

Card 1/3

62-58-4-5, '32

Boron-Organic Compounds. Communication 22: On the Mechanism of Hydrolysis of Diarylboric Ester.

previous paper the mechanism of saponification of the esters of diarylboric acid was discussed. In the first reaction stage ammoniacates of the esters of diarylboric acids form with subsequent hydrolysis (formula 7). A second possibility for the formation of ammonium salts of ammoniacates by displacement of ammonia into the outer sphere of the complex with simultaneous formation of diarylalkoxyborates of ammonium does not exist as these compounds can be hydrolyzed ( formulae VI, VIII, IX). A number of esters of diarylboric acids and their ammoniacates were synthesized. Furthermore hitherto unknown Di-o-tolyl and Di- $\beta$ -tolylboric acids and their derivatives were produced.

There is 1 table, and 7 references, 2 of which are Soviet.

Card 2/3

62-56-4-5/32

Boron -Organic Compounds. Communication 22: On the Mechanism of Hydrolysis of Diarylboric Ester<sub>s</sub>

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry imeni N. D. Zelinskogo, AS USSR)

SUBMITTED: November 20, 1956

AVAILABLE: Library of Congress

1. Boron compounds 2. Diarylboric esters—Hydrolysis processes

Card 3/3

MIKHAYLOV, B.M.; VAYER, V.A.

Organoboron compounds. Report No.22 Hydrolysis mechanism of the diarylborates. Izv. AN SSSR Otd. khim. nauk no.4:425-427 Ap '58.  
(MIRA 11:5)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii  
nauk SSSR.  
(Hydrolysis) (Boric acid)

VAVER, V.A.; PROKATOV, N.V.; USHAROV, A.N.; FOKROV, G.A.; KUPREJON, I.V.

Chemistry of lipids. Report No.5. Dihydric alcohol derivatives as  
new kinds of neutral lipids. Khim. prirod. soed. no.6:27(1-405) 1965.  
(MIRA 1965)

1. Institut khimii prirodnnykh soyedinenii AN SSSR. Submitted  
June 21, 1965.

L 26541-66 EWT(m) RM

ACC NR: AP6017362

SOURCE CODE: UR/0062/66/000/003/0506/0511

29  
BAUTHOR: Bergel'son, L. D.; Vaver, V. A.; Barsukov, L. I.; Shemyakin, M. M.

ORG: Institute of Chemistry of Natural Compounds, AN SSSR (Institut khimii prirodnykh soyedinenii AN SSSR)

TITLE: Stereoregulated synthesis of unsaturated compounds. Report 10. Stereochemistry of the reactions between aldehydes and phosphonate- and phosphinoxide-carbanions

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 506-511

TOPIC TAGS: stereochemistry, organic synthetic process, aldehyde, organic phosphorus compound

ABSTRACT: The reaction between phosphonate- and phosphinoxide-carbanions with aromatic and aliphatic aldehydes leads selectively to the trans-olefins. The steric trend of the reaction does not depend on the polarity of the medium. Orig. art. has: 5 figures and 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 05Nov63 / ORIG REF: 008 / OTH REF: 009

Card 1/1 CC

UDC: 541.64 / 542.91

2

BERGEL'SON, L.D.; VAVER, V.A.; PROKAZOVA, N.V.

New types of neutral lipids. Dokl. AN SSSR 157 no.1:122-124  
Jl '64 (MIRA 17:8)

1. Institut khimii prirodnnykh soyedineniy AN SSSR. Predstavлено  
akademikom M.M. Shemyakiny.

VAVER, V.A.; PROKAZOVA, N.V.; BERGEL'SON, L.D.

New types of neutral lipids. Izv.AN SSSR.Ser.khim. no.2:392 <sup>2</sup>  
'64. (MIRA 17:3)

1. Institut khimii prirodnnykh soyedineniy AN SSSR.

BERGEL'SON, L.D.; VAVER, V.A.; BARSUKOV, L.I.; SHEMYAKIN, M.M.

Unsaturated acids and macrocyclic lactones. Report No.11: Total synthesis of cis-8-hexadecenoic, cis-11-hexadecenoic (palmitylaccenic), cis-7-octadecenoic, and cis-9-hexacosanoic acids. Izv.AN SSSR. Ser.khim. no.8:1417-1421 Ag '63. (MIRA 16:9)

1. Institut khimii prirodnnykh soyedineniy AN SSSR.  
(Hexadecenoic acid) (Octadecenoic acid) (Hexacosanoic acid)

BERGEL'SON, L.D.; VAVER, V.A.; BARSUKOV, L.I.; SHEMYAKIN, M.M.

Stereochemistry and the mechanism of Wittig reaction. Izv. AN SSSR.  
(MIRA 16:7)  
Otd.khim.nauk no.6:1053-1063 Je '63.

1. Institut khimii prirody soyedineniy AN SSSR.  
(Stereochemistry) (Wittig reaction)

BERGEL'SON, L.D.; VAVER, V.A.; BARSUKOV, L.I.; SHEMYAKIN, M.M.

Intramolecular acylation of phosphorylides and a new way of  
synthesizing  $\alpha$ -substituted cyclopentanones. Izv. AN SSSR.  
Otd. khim. nauk no. 6:1134-1136 Je '63. (MIRA 16:7)

1. Institut khimii prirodykh soyedineniy AN SSSR.  
(Cyclopentanone)  
(Phosphorus organic compounds)

BERGEL'SON, L.D.; VAVER, V.A.; SHEMYAKIN, M.M.

New method of synthesizing cis-cis-diene-methane systems.  
Izv. AN SSSR. Otd. khim. nauk no. 10:1894-1895 O '62. (MIRA 15:10)

1. Institut khimii prirodnykh soyedineniy AN SSSR.  
(Methane) (Butadiene)

BERGEL'SON, L.D.; VAVER, V.A.; BEZZUBOV, A.A.; SHEMYAKIN, M.M.

Unsaturated acids and macrocyclic lactones. Part 3: Using Wittig reaction for the synthesis of higher fatty acids with a branched chain. Zhur. ob. khim. 32 no.6:1807-1811 Jr '62. (MIRA 15:6)  
(Acids, Fatty) (Wittig reaction)

BERGEL'SON, L.D.; VAVER, V.A.; KCVTUN, V.Yu.; SENYAVINA, L.B.; SHEMYAKIN, M.M.

Unsaturated acids and macrocyclic lactones. Part 2: Stereospecific  
method for synthesizing natural unsaturated fatty acids with the aid  
of Wittig reaction. Zhur. ob. khim. 32 no. 6:1802-1807 Je '62.  
(MIRA 15:6)

(Acids, Fatty) (Wittig reaction) (Unsaturated compounds)

BERGEL'SON, L.D.; VAVER, V.A.; BARSUKOV, L.I.; SHEMYAKIN, M.M., akademik

Mechanism and steric course of the Wittig reaction as affected  
by external factors. Dokl. AN SSSR 143 no.1:111-114 Mr '62.  
(MIRA 15:2)

1. Institut khimii prirodnnykh soyedineniy AN SSSR.  
(Wittig reaction)  
(Stereochemistry)

VAVER, V. A., SHEMYAKIN, M. M., BERGELSON, L. D. (USSR).

"A New Way of Fatty Acid Synthesis."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 August 1961

BERGEL'SON, L.D.; VAVER, V.A.; SHEMYAKIN, M.M.

Effect of the solvent on the steric course of the Wittig reaction.  
Izv.AN SSSR Otd.khim.nauk no.4:729-730 Ap '61. (MIRA 14:4)

1. Institut khimii prirodnykh soyedineniy AN SSSR.  
(Chemical reaction)

S-3700

89517

S/079/61/031/002/010/019  
B118/B208

AUTHORS: Mikhaylov, B. M. and Vaver, V. A.

TITLE: Organoboron compounds. LXVII. Reactions of trialkyl borines with organic acids

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 2, 1961, 574-577

TEXT: Following their previous paper (Ref. 1) on the effect of compounds having a mobile hydrogen atom (water, alcohols, phenols, amines, mercaptans, thiophenol) on trialkyl borines, which gives compounds of type (I), and saturated hydrocarbons and  $H_2$  ( $R_3B + HYR' \rightarrow R_2BYR' + RH + R - H + H_2$  (Y

= O, NH, S: R' = H or a carbon radical), the authors now investigated the conversions of trialkyl borines on reaction with organic acids. Except for the reaction of acetic acid with triethyl borine giving diethyl boro acetic anhydride and ethane carried out by H. Meerwein, H. Sönke (Ref. 2), no further reactions of this type have been described. The experiments made by these two scientists were repeated, and their data confirmed at equimolecular quantities of the initial products. When the equimolecular quantity

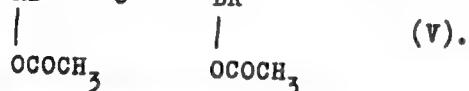
Card 1/3

89517

Organoboron compounds. LXVII. ...

S/079/61/031/002/010/019  
B118/B208

of acetic acid is doubled, ethyl pyro-boro acetic anhydride is formed via the monoacetate. The formation of the latter is explained by the fact that the monoacetate is converted to ethyl boron acetic anhydride two molecules of which split off one molecule of acetic anhydride. The synthesis of mixed anhydrides of organopyro-boric and organic acids had been carried out earlier by N. S. Fedotov and T. A. Shchegoleva (Refs. 3-5). Also the higher trialkyl borines react with acetic acid, even at room temperature, with spontaneous heating to 50-60°C; further heating of the reaction mixture between 60 and 100°C soon completes the reaction. Contrary to triethyl borine, the higher trialkyl borines react with acetic acid to give the corresponding alkyl pyro-boro acetic anhydrides. At excess acetic acid, n-butyl pyro-boro acetic anhydride ( $V, R = n - C_4H_9$ ) or isobutyl pyro-boro acetic anhydride ( $V, R = iso - C_4H_9$ ) result after separation of two moles of the saturated hydrocarbon, and in subsequent distillation of the reaction mixture (Refs. 4, 5):  $RB - O - BR$



Card 2/3

89517

Organoboron compounds. LXVII. ...

S/079/61/031/002/010/019  
B118/B208

On reaction of chloro acetic acid with tri-n-butyl borine, the anhydrides of n-butyl boric and chloro acetic acids and n-butane result. There are 5 references: 4 Soviet-bloc.

SUBMITTED: March 14, 1960

✓

Card 3/3

MIKHAYLOV, B.M.; VAVER, V.A.

Organoboron compounds. Report No. 56: Synthesis of trialkyl  
borons from metaborates, and their conversion into esters of  
dialkylboronic acids. Izv. AN SSSR Otd. khim. nauk no. 5:852-856  
(MIRA 13:6)  
My '60.

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii  
nauk SSSR.  
(Boron organic compounds)

5 (3)  
AUTHORS:

Mikhaylov, B. M., Vaver, V. A.

50V/19-21-7-31/85

TITLE:

Organoboron Compounds (Bororganicheskiye soyedineniya).  
XXXVII. Lithium Salts of the Diaryl Boric Acids and Their  
Complex Compounds with Dioxane (XXXVII. Litiyevyye soli  
diariibornykh kislot i ikh kompleksnyye soyedineniya s dioksanom)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 2248-2253 (USSR)

ABSTRACT:

In continuation of earlier investigations the authors show that diaryl boric acids react like protonic acids in anhydrous media. Unexpectedly they obtained the lithium salt of di- $\alpha$ -naphthyl boric acid ( $\alpha$ -C<sub>10</sub>H<sub>7</sub>)<sub>2</sub>BO<sub>3</sub>Li (I) as the main product in the reaction of phenyl lithium with di- $\alpha$ -naphthyl boric acid. This salt is formed even more easily from n.-butyl lithium and di- $\alpha$ -naphthyl boric acid in benzene solution (Scheme 2). The reaction of n.-butyl lithium with di-o-tolyl boric acid (Scheme 3) which leads to the formation of a mixture from the lithium salts of di-o-tolyl- and o-tolyl butyl boric acid, is much more complicated. Their formation is explained by the decomposition of compound (III), in contrast to (II), under the separation of butane and toluene. With dioxane in absolutely anhydrous ether

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Organoboron Compounds. *XXVII. Lithium Salts of the Diaryl Boric Acids and Their Complex Compounds with Dioxane*

30V/19-29-1-51/55

it was possible to separate from this salt mixture the pure lithium salt of the di-o-tolyl boric acid in the form of its complex compound with dioxane. The lithium salt of o-tolyl-butyl boric acid could not be separated, its presence, however, was found to be probably due to the resultant per cent content of boron (Refs 4,5). In order to prevent the formation of salts of aryl butyl boric acids, only o-tolyl or p-tolyl lithium were used in the experiments for obtaining the lithium salts of di-o-tolyl and di-p-tolyl boric acid. The necessary individual organolithium compounds were obtained by the reaction of n.-butyl lithium with aryl bromides in benzene dioxane solution and in the form of their crystalline dioxanates (Ref 6). The p-tolyl lithium was synthesized from n.-butyl lithium and tri-p-tolyl antimony (Ref 6). By this method the lithium salt of di-p-tolyl boric acid and the dioxanate of the lithium salt of the di-o-tolyl boric acid were obtained. The dioxanates of the lithium salts of the diaryl boric acids may be synthesized directly by the reaction of lithium compounds with the dioxanates of the diaryl boric acids (e. g. compound (V) according to

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SOV/19-29-7-31/83  
Organoboron Compounds. XXXVII. Lithium Salts of  
the Diaryl Boric Acids and Their Complex Compounds With Dioxane

scheme 5). There are 7 references, 6 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute  
of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: June 26, 1958

Card 3/3

5(2,3)

AUTHORS:

Mikhaylov, B. M., Vaver, V. A., Bubnov, Yu. N.

SOV/20-126-3-32/69

TITLE:

Organoboron Compounds (Bororganicheskiye soyedineniya). Reactions Between Boron Trialkyls and Compounds Containing Mobile Hydrogen (Reaktsii bortrialkilov s soyedineniyami, soderzhashchimi podvizhnnyy vodorod)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3,  
pp 575 - 578 (USSR)

ABSTRACT:

The ability of aliphatic boron compounds to undergo the reactions mentioned in the subtitle is very little investigated (Refs 1-6). Triallyl boron possesses, however, an extraordinary sensitivity to the reagents mentioned in the subtitle. It reacts with water, alcohols and amines, even at room temperature. One or two allyl radicals are replaced by corresponding groups. For these reasons, the subject mentioned in the subtitle was of considerable interest. The influence of the nature of initial substances on the rupturing process of the boron-carbon compound could be established. The authors studied the reactions between tri-n-propyl-, tri-isopropyl-tri-n-butyl, tri-isobutyl- and tri-iso-amyl-boron on one hand, and water, alcohol, phenol, amines and

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Organoboron Compounds. Reactions Between Boron Trialkyls SOV/20-126-3-32/69  
and Compounds Containing Mobile Hydrogen

mercaptans on the other hand. It has been found that higher boron trialkyls react energetically with water at 160-170°. Dialkyl boric acids (I) are formed which are isolated in the distillation as acid anhydrides with yields of 65-71% (Table 1). The reaction is accompanied by the formation of olefine hydrocarbons and hydrogen as well as saturated hydrocarbons (see Scheme). The occurring relative hydrocarbon- and hydrogen quantities depend on the test conditions. Boron trialkyls react under the same conditions with aliphatic alcohols or with phenol. Thus, they form alkyl or phenyl ester of the dialkyl boric acids (II) with yields of 65-80%, as well as saturated and olefine hydrocarbons and hydrogen. These reactions, as well as those of the aliphatic and aromatic amines (III), finally those of the mercaptans (IV), proceed in stages: they run through a stage of complex compounds of boron trialkyls and oxygen-, nitrogen- and sulphur-addenda (V). These compounds (V)(1) undergo two kinds of transformations: a) the complexes decompose into saturated hydrocarbons and corresponding organoboron compounds (VI)(2). It seems here that a proton is removed from the heterogeneously bound atom, and the alkyl group is split

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Organoboron Compounds. Reactions Between Boron Trialkyls SOV/20-126-3-32/69  
and Compounds Containing Mobile Hydrogen

off as an anion from the boron atom. b) Olefine hydrocarbon and hydrogen are eliminated and formed (VI) according to scheme (3). This process is most distinctly marked at the interaction of the boron trialkyls with water, alcohols and amines. The transformation of complexes (V) according to scheme (3) is also possible with the formation of dialkyl boranes (VII) which then separate a hydrogen molecule. The above reactions are simple and easy methods of producing the mentioned compounds. There are 1 table and 10 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskogo of the Academy of Sciences, USSR)

PRESENTED: February 9, 1959, by B. A. Kazanskiy, Academician

SUBMITTED: February 9, 1959

Card 3/3

VAYER, V. A.

AUTHORS: Alekseyeva, Ye. N., Vayer, V. A. SCV/156-58-3-37/52

TITLE: The Deposition of Phthalimide on the Esters of  $\alpha$ -,  $\beta$ -Unsaturated Acids (Prisoyedineniye ftalimida k efiram  $\alpha$ ,  $\beta$ -nenasyshchennykh kislot)

PERIODICAL: Nauchnyye doklady vyschey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 545 - 549 (USSR)

ABSTRACT: The possibility of the use of the catalyst of Radionov was investigated in the deposition of phthalimide on the double bonds of the alkaldenemalonic and alkaldeneacetoacetic esters, the esters of cinnamic acid and benzene acetone. The reaction takes place effectively for the ethylidene-, propylidene-, isoamylidene-, and benzolidene-malonic esters. The acid hydrolysis of the phthalimide derivatives of the alkildene malonic esters leads to the corresponding  $\beta$ -amino acids. By employing this method  $\beta$ -aminoisoeneanthic acid,  $\beta$ -aminobutyric acid,  $\beta$ -aminovaleric acid, and  $\beta$ -amino- $\beta$ -phenylpropionic acid were synthetized for the first time. There are 2 tables and 6 references, 1 of which is Soviet.

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The Deposition of Phthalimide on the Esters of  $\alpha$ -,  
 $\beta$ -Unsaturated Acids

SOV/156-58-3-37/52

ASSOCIATION:

Kafedra organicheskoy khimii Morskogo khimiko-  
tekhnologicheskogo instituta im.D.I.Mendeleyeva (Chair of In-  
organic Chemistry at the Moscow Chemical and Technological  
Institute imeni D.I.Mendeleyev)

SUBMITTED: November 19, 1957

Card 2/2

BERGEL'SON, L.D.; VAVER, V.A.; SHEMYAKIN, M.M.

New method of synthesizing unsaturated acids. Izv. AN SSSR Otd. khim.  
nauk no.10:1900 O '60. (MIRA 13:10)

1. Institut khimii prirodnykh soyedineniy AN SSSR.  
(Unsaturated compounds) (Acids, Organic)

MIRKAYLOV, B.M. V.V., V.A.

Organoboron compounds. Part 67: Reactions of boron trialkyls  
with organic acids. Zhur. ob. khim. 31 no. 2:574-577 F '61.  
(I.I. 14:2)

(Boron organic compounds) (Acetic acid)

VAVERAN, V. A.

VAVERAN, V. A. -- "Crystalline Acting Substances of Branchy Fern -- Dryopteris Dilatata Aza Gray." Latvian State U, 1952. In Latvian  
(Dissertation for the Degree of Candidate of Pharmaceutical Sciences)

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9, Sept., 1955

VAVERAN, V. A.

USSR/Cultivated Plants. Medicinal. Essential Oils. Poisons.

M-9

Abs Jour: Ref Zhur-Biologiya, No 5, 1958, 20572.

Author : V. Vaverane

Inst : Not given.

Title : Some Relative Data on Male and Branchy Ferns.  
(Nekotoryye srasitel'nyye dannyye o muzhskom i raskidistom  
paporotnike).

Orig Pub: Izv. AN LatvSSR, 1956, No 7, 81-88.

Abstract: Investigation of an extract from the male fern has established that its constant constituent parts are flavaspidic and filixic acids. A study of extracts from the branchy fern was made on 10 specimens, collected at different times and in different rayons of the Latvian SSR. It was established that the number of crystallized substances in these extracts depends basically on the place and condi-

Card : 1/2

VAVERANE, V.

(2)

Preparation of liver hydrolyzates and their biological testing. V. Vaverane (Med. Inst. Riga, Latvia). *Latvijas PSR Zinātņu Akad. Vēstis* 1954, No. 3 (Whole No. 80), 71-7 (Russian summary, 77-8).—A mixt. of 750 g. ground liver and 4500 ml. 0.01 M  $H_3PO_4$  was autolyzed under toluene for 24 hrs. at 42°. The hydrolysis was completed within next 24 hrs. with 100 mg. % pepsin at pH 1.5-2 and same temp. The hydrolyzate was filtered, concd. by evaporation, neutralized with  $NaHCO_3$  to pH 8.8, and sterilized. The product contained 6 mg. of amino N, and 9.27 total N per ml. Introduced intravenously, it was not pyrogenic and did not influence the activity of the proteolytic blood enzymes. The cattle liver autolyzed more easily than that from hogs. The autolysis product showed pinkish coloration in the biuret test. Andrew Dravnieks

V A V E R A N E , V.

U S S R .

Capillary (paper chromatography) and luminescence analysis of fern extracts and their components. V. V. Verlone. *Latvijas PSR Zinātņu Akad. Viestis* 1954, No. 10 (Whole No. 87), 83-91 (Russian summary, 91).—Filter paper chromatograms of excts. from *Dryopteris dilatata* (I) and *D. flexuosa* (II) differed, especially under ultraviolet radiation. Fluorescence of I was bright-red; of II, dark-red with green.

Ish. that. The following compds. were isolated from I, with the following fluorescence colors: aspidin, orange-red; aspidin, carmine-red; alaspidin (III), purple-red; davaspidic acid, red; nephrodin, yellow-red. Each behaved as an individual compd. These substances retained red fluorescence in alk. solns., except III. Filmarone behaved as a mixt. Raw filicin had red fluorescence. A. D.

NEYLAND, O.; VAVERE, M.

Synthesis of the system 1,3,5,7-tetraketo-a-hydrindacene.  
Zhur. ob. khim. 33 no.3:1044-1045 Mr '63. (MIRA 16:3)

1. Rizhskiy politekhnichesiy institut.  
(Hydrindacene) (Carbonyl group)

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APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859030002-3"

VAVERKA, J.

Replacement work on continuous rails.

P. 85 (Zeleznici Technika) Vol. 5, No. 4, Apr. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

VAVRICKA, J.

Dilation contacts of "Ion" rails.

p. 296 (Zeleznicni Technika. Vol. 5, no. 11, Nov. 1957, Treba, Czechoslovakia)

Monthly Index of East European Accessories (EIAI) I.C. Vol. 7, no. 2,  
February 1958

VAVERKA, Jcsef, prof., inz., dr., Dr.Sc.

Dilatation of rails of non-contact railway track in a frozen bed.  
Zel dop tech 10 no. 3:71-75. '62.

VAVERKA, J., inz. dr.

Further trends in the development of railroad bei maintenance  
Zel dop tech 12 no.12:315-316 '64.

VAVERKA, J.

Continuous rails. p. 321. (LOVA TECHNIKA, Vol. 1, No. 11, Nov 1956, Praha,  
Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

CZECHOSLOVAKIA  
25 Sep 63

VAVERKA, Jan

Chairman, Commission for Construction, North Moravian  
Kraj National Committee in Ostrava, author of an  
article on the situation in the construction in  
Ostrava Okres.

Nova Svoboda, Ostrava, 25 Sep 63, p 2.

(1)

VAVERKA, J.; POSPICHALOVA, D.; CIRLIC, J.

Degree of wrinkle resistance. p. 88.

TEXTIL. (Ministerstvo lehkeho prumyslu) Praha, Czechoslovakia. Vol. 14,  
no. 3, March 1959.

Monthly List of East European Accessions (EFAI) LC, Vol. 8, No. 11,  
November 1959.

Uncl.

STANEK, Karel; VAVERKA, Miroslav, inz.

Experience with the construction of the press shop in the  
enterprise Zavody na výrobu kulickových ložisek. Poz stavby  
č. 11 no. 1:24-26 '63.

1. Ingstav, Brno.

SIMIONESCU, T., ing.; VAVERNIA, L., ing.

Influence of some parameters of card setting upon the quality  
of yarns produced in woolen spinning. Ind text Rum 14 no.1:  
16-21 Ja '63.

1. Institutul de cercetari textile.

KAPLAN, Pafael' Markovich, kand.tekhn.nauk; VAVILIN, Dmitriy Vasil'yevich,  
inzh.-mekh.; GAMBURG, Yefim Moiseyevich, inzh.-mekh.; SHVYDKO, Z..  
red.; NAGIBIN, P., tekhn.red.

[Mechanization of production processes on dairy farms] Mekhani-  
zatsiia proizvodstvennykh protsessov na MTF. Alma-Ata, Kazakhskoe  
gos. izd-vo, 1958. 172 p. (MIRA 11:12)  
(Dairying) (Farm equipment)